

FLOWER VISITATION BY THE BUMBLE BEE *BOMBUS TERRESTRIS* (L.) (HYMENOPTERA: APIDAE) IN TASMANIA

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Abstract

To date the bumble bee *Bombus terrestris* (L.), first detected in Tasmania in February 1992, is known to have visited 156 introduced and 14 native species of plants there.

Introduction

The bumble bee *Bombus terrestris* (L.), first detected in Australia in a garden in Battery Point, Hobart in February 1992 (Semmens *et al.* 1993), has spread throughout most of Hobart, including the Eastern Shore and Collinssvale, down into the Huon Valley, at Franklin and Cygnet, into the Channel area south of Hobart; also to the west of Hobart to New Norfolk and Mt Field and to the north of Hobart to Kempton. It appears to be thriving in southern Tasmanian conditions. This species is one of 4 introduced into New Zealand from the United Kingdom in 1885-1906 for pollination purposes, particularly of red clover; it may have spread to Australia from New Zealand.

Flower visitation

The flower visiting rate of *Bombus terrestris* is much higher than for other bees (Donovan and Macfarlane 1984). In Tasmania at least 170 plant species have been visited - 156 introduced and 14 native species (Table 1). This agrees with findings in New Zealand, where *Bombus terrestris* was reported to have visited at least 400 introduced and 19 native species (Donovan and Macfarlane 1984).

Table 1. Plant species visited by the bumble bee *Bombus terrestris* in Tasmania to July 1996.

Native Species	
<i>Acacia pravissima</i> (Ovens Wattle)	<i>Eucryphia lucida</i> (Leatherwood)
<i>Banksia marginata</i> (Banksia)	<i>Exocarpos cupressiformis</i> (Native Cherry)
<i>Callistemon pallidus</i> (Bottlebrush)	<i>Grevillea</i> sp. (Grevillea)
<i>Callistemon viridiflorus</i> (Green Bottlebrush)	<i>Melaleuca armillaris</i> (Bracelet Honey Myrtle)
<i>Correa nummularifolia</i> (Native Fuchsia)	<i>Melaleuca squamea</i> (Swamp Honey Myrtle)
<i>Epacris languinosa</i> (White Epacris)	<i>Oxylobium ellipticum</i> (Golden Rosemary)
<i>Eucalyptus ficifolia</i> (Red Flowering Gum)	<i>Westringia</i> sp. (Native Rosemary)
Introduced Species	
<i>Abelia schumannii</i> (Abelia)	<i>Aquilegia</i> sp. (Columbine, Granny's Bonnet)
<i>Acanthus</i> sp. (Bear's Breeches, Oyster Plant)	<i>Arbutus unedo</i> (Irish Strawberry)
<i>Acer psuedoplatanus</i> (Sycamore)	<i>Arctotis</i> sp. (African Daisy)
<i>Acontium napellus</i> (Monkshood)	<i>Asparagus officinalis</i> (Asparagus)
<i>Actinidia chinensis</i> (Kiwi Fruit)	<i>Aubrieta</i> sp. (Aubrieta)
<i>Agapanthus orientalis</i> (Agapanthus)	<i>Bellis</i> sp. (Daisy)
<i>Ajuga</i> sp. (Ajuga)	<i>Beta vulgaris</i> (Swiss Chard)
<i>Alcea rosea</i> (Hollyhock)	<i>Borago officinalis</i> (Borage)
<i>Allium schoenoprasum</i> (Chives)	<i>Brassica oleraceae</i> (Broccoli)
<i>Alstroemeria</i> sp. (Peruvian Lily)	<i>Brassica</i> sp. (Tatsoi)
<i>Antirrhinum majus</i> (Snapdragon)	<i>Buddleia</i> sp. (Buddleia)

Introduced Species (cont.)

<i>Cakile maritima</i> (Sea Rocket)	<i>Lobelia</i> sp. (Lobelia)
<i>Ceanothus</i> sp. (Ceanothus)	<i>Lobularia maritana</i> (Sweet Alice)
<i>Centaurea cyanus</i> (Cornflower)	<i>Lonicera japonica</i> (Honeysuckle)
<i>Centranthus ruber</i> (Valerian, Kiss-me-quick)	<i>Lophomyrtus</i> sp. (Lophomyrtus)
<i>Cerastium tomentosum</i> (Snow-in-summer)	<i>Lupinus</i> sp. (Lupin)
<i>Chaenomeles</i> sp. (Japonica)	<i>Lycopersicon esculentum</i> (Tomato)
<i>Citrus aurantium</i> (Orange)	<i>Malus domestica</i> (Apple)
<i>Citrus limon</i> (Lemon)	<i>Malus ioensis</i> (Flowering Apple)
<i>Citrus paradisi</i> (Grapefruit)	<i>Matthiola</i> sp. (Stock)
<i>Citrus reticulata</i> (Mandarin)	<i>Meconopsis betonicifolia</i> (Blue Poppy)
<i>Clematis</i> sp. (Clematis)	<i>Melissa officinalis</i> (Balm, Lemon Balm)
<i>Coleonema</i> sp. (Golden Diosma)	<i>Mentha piperita</i> var <i>citrata</i> (Mint)
<i>Consolida</i> sp. (Larkspur)	<i>Monarda</i> sp. (Bergamot)
<i>Convolvulus</i> sp. (Convolvulus)	<i>Myosotis</i> sp. (Forget-me-not)
<i>Conyza</i> sp. (Erigeron)	<i>Myrtus communis</i> (European Myrtle)
<i>Coprosma</i> sp. (Coprosma)	<i>Myrtus ugni</i> (Chilean Guava)
<i>Corylus avellana</i> (Hazel)	<i>Nepeta cataria</i> (Catmint)
<i>Cosmos</i> sp. (Cosmos)	<i>Nothofagus</i> sp. (Beech)
<i>Cotoneaster horizontalis</i> (Cotoneaster)	<i>Origanum vulgare</i> (Oregano)
<i>Crocus</i> sp. (Crocus)	<i>Paeonia</i> sp. (Peony Rose)
<i>Cucurbita</i> sp. (Pumpkin)	<i>Papaver nudicaule</i> (Icelandic Poppy)
<i>Cytisus palmensis</i> (Tree Lucerne)	<i>Papaver orientale</i> (Oriental Poppy)
<i>Daboecia cantabrica alba</i> (Irish Heath)	<i>Passiflora</i> spp. (Passionfruit)
<i>Dahlia</i> sp. (Dahlia)	<i>Pelargonium</i> sp. (Pelargonium)
<i>Delphinium</i> sp. (Delphinium)	<i>Penstemon</i> sp. (Penstemon)
<i>Dianthus</i> sp. (Carnation)	<i>Petunia</i> sp. (Petunia)
<i>Digitalis purpurea</i> (Foxglove)	<i>Phaseolus coccineus</i> (Scarlet Runner Bean)
<i>Dimorphotheca</i> sp. (African Daisy)	<i>Philadelphus mexicanus</i> (Mock Orange)
<i>Echium fastuosum</i> (Pride of Madeira)	<i>Phragmites karka</i> (Bamboo)
<i>Erica</i> sp. (Erica)	<i>Pittosporum</i> sp. (Pittosporum)
<i>Escallonia</i> sp. (Escallonia)	<i>Plantago lanceolata</i> (Lamb Tongue, Plantain)
<i>Fortunella</i> sp. (Cumquat)	<i>Polemonium caeruleum</i> (Jacob's Ladder)
<i>Freesia refracta</i> (Freesia)	<i>Polygonatum</i> sp. (Solomon's Seal)
<i>Fuchsia</i> sp. (Fuchsia)	<i>Protea aurea</i> (Cream Protea)
<i>Fumaria muralis</i> (Fumitory)	<i>Prunus persica</i> (Peach)
<i>Gaillardia</i> sp. (Blanket Flower)	<i>Prunus</i> sp. (Cherry)
Genus unknown (Broom)	<i>Pseudofumaria alba</i> (Corydalis)
Genus unknown (Cactus)	<i>Pyracantha</i> sp. (Pyracantha)
Genus unknown (Orchid)	<i>Rhododendron</i> spp. (Rhododendron, Azalea)
<i>Geranium</i> sp. (Geranium)	<i>Ribes nigrum</i> (Blackcurrant)
<i>Gladiolus</i> sp. (Gladiolus)	<i>Ribes sanguineum</i> (Flowering Currant)
<i>Hebe</i> sp. (Hebe)	<i>Rosa</i> spp. (Roses)
<i>Hedera helix</i> (Ivy)	<i>Rosmarinus officinalis</i> (Rosemary)
<i>Hedychium</i> sp. (Ginger Lily)	<i>Rubus fruticosus</i> (Blackberry)
<i>Helianthus annuus</i> (Sunflower)	<i>Rubus idaeus</i> (Raspberry)
<i>Hydrangea macrophylla</i> (Hydrangea)	<i>Rubus ursinus</i> (Boysenberry)
<i>Hypericum perforatum</i> (St Johns Wort)	<i>Salvia officinalis</i> (Sage)
<i>Impatiens glandulifera</i> (Balsam)	<i>Salvia</i> sp. (Bog Sage)
<i>Jacaranda mimosifolia</i> (Jacaranda)	<i>Scabiosa columbaria</i> (Butterfly Blue)
<i>Jasmine</i> sp. (Jasmine)	<i>Schizanthus pinnatus</i> (Poor Man's Orchid)
<i>Kerria japonica</i> (Kerria)	<i>Senecio cruentus</i> (Cineraria)
<i>Laburnum</i> sp. (Laburnum)	<i>Solanum tuberosum</i> (Potato - "Pinkeye")
<i>Lampranthus</i> sp. (Pigface)	<i>Solidago canadensis</i> (Goldenrod)
<i>Lathyrus odoratus</i> (Sweet Pea)	<i>Symphandra hoffmannii</i>
<i>Lavandula alba</i> (English Lavender)	<i>Symphytum</i> sp. (Comfrey)
<i>Lavandula allardi</i> (French Lavender)	<i>Syringa</i> sp. (Lilac)
<i>Lavandula dentata</i> (French Lavender)	<i>Tagetes</i> sp. (French Marigold)
<i>Lavandula vera</i> (English Lavender)	<i>Taraxacum officinale</i> (Dandelion)
<i>Lavatera trimetris</i> (Mallow)	<i>Tecoma</i> sp. (Tecoma)
<i>Limonium</i> sp. (Statice)	<i>Tibouchina</i> sp. (Lasiandra)

Introduced Species (cont.)

<i>Trifolium repens</i> (White Clover)	<i>Vicia faba</i> (Broad Bean)
<i>Trifolium</i> sp. (Clover)	<i>Viola</i> sp. (Pansy)
<i>Tropaeolium</i> sp. (Nasturtium)	<i>Viola wittrockiana</i> (Pansy)
<i>Tulipa</i> sp. (Tulip)	<i>Virgilea</i> sp. (Virgilea)
<i>Ulex europaeas</i> (Gorse)	<i>Watsonia</i> sp. (Watsonia)
<i>Veronica</i> sp. (Veronica)	<i>Weigela</i> sp. (Weigela)
<i>Vicea</i> sp. (Vetch)	<i>Wistaria</i> sp. (Wisteria)

Acknowledgment

I thank Dennis Morris of the Tasmanian Herbarium for assistance in identification of the plants.

References

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